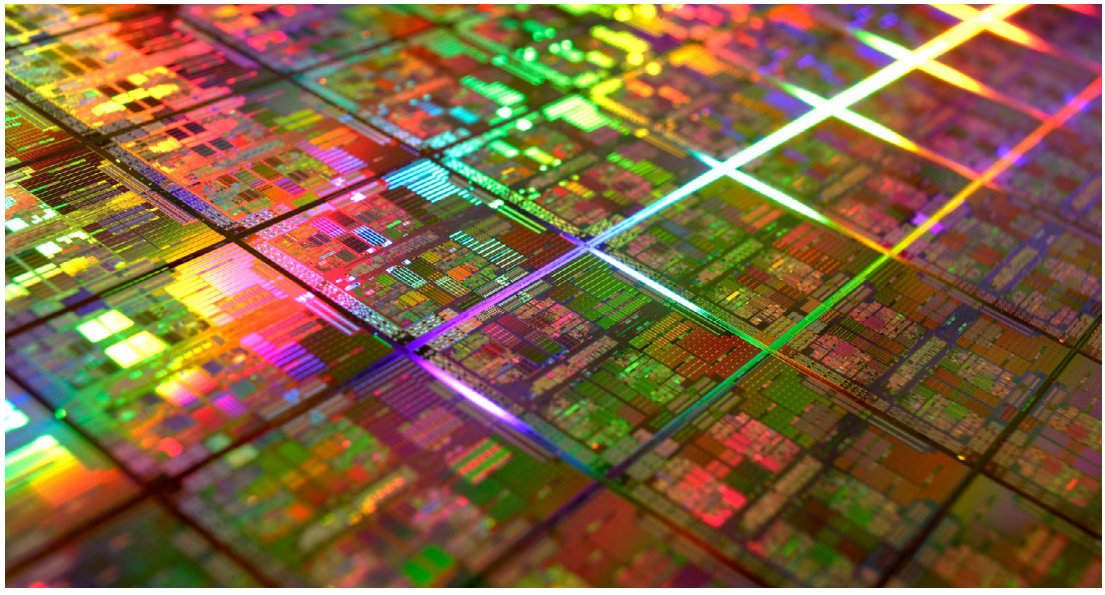

Microchips, Source: Ai.Comput'In (CC).

Engineering China's Militarised Neoliberalism

Class, State, and Technology

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An industrial policy renaissance, trade controls, and geopolitical challenges are further complicating the permanent features of the current global (dis)order that is already facing a poly-crisis: economic stagnation, climate crisis, and interstate war. The era of neoliberal globalisation—often seen as being synonymous with the Washington Consensus—that has long been a central feature of the international order is now over. The Washington Consensus put strong emphasis on market fundamentalism, with fiscal discipline, trade liberalisation, and deregulation as its ideological touchstones (Williamson 2004). The growing tension between the United States and China is transforming the neoliberal order, resulting in a menu of solutions—export controls, bilateral agreements, and investment screenings—that, for many sceptics, are enough to signal the demise of neoliberal governance (see, for instance, Gerstle 2022).

We contend that rather than a crisis of neoliberal governance, the current (dis)order has led to the emergence of a form of what we have elsewhere called militarised neoliberalism: a new system of market

coordination that is characterised by the repurposing and reorganisation of security and economic institutions as well as specific alliances in a way that can enable or facilitate global economic accumulation by states (Wijaya and Jayasuriya 2024). The so-called Bidenomics is an exemplar of this new militarised neoliberalism. It is based on new trade controls and the strengthening of the United States' system of allies, including the Quad, 'like-minded states', and AUKUS, which, taken together, have largely repurposed the function of US security agencies and transformed the global order (see also Rolf and Schindler 2023).

The new post-neoliberal disguise does not take shape in the context of geopolitical security per se, but rather in concomitance with the United States' structural crisis driven by 'uneven and combined development' (UCD). UCD refers to variations in state forms and systems of accumulation that interact with one another and form a variegated capitalist totality. This dynamic in turn reproduces uneven patterns of national capital accumulation.

The period from the 1990s to the 2000s, when China and the United States enjoyed ever closer economic and trade relations, resulted in rapid industrialisation in China, while the US economy became more deindustrialised, in part because of wave after wave of offshoring that led to the hollowing out of the country's industrial heartland. While militarised neoliberalism was designed to rebuild American manufacturing, it is resulting in the concentration of wealth into the hands of techno-capitalist elites at the expense of the working class. Strategic industries such as artificial intelligence (AI), batteries, and semiconductors are now served by security agreements and combative industrial policies that benefit these new capitalist elites, including companies such as Tesla and Nvidia, but fail the expectations of both the working and the middle classes.

Our key point here is that the UCD of global capitalism in the post–Cold War era has intensified the political and economic crises of the US-led neoliberal order. In this context, the development of militarised neoliberalism has manifested in an interrelated but distinct way in the 'national social formations' of both the United States and China. The response to this crisis is the emergence of hybrid economic-security institutions that, in turn, have shaped the trajectories of capitalist transformation. To be sure, China's neoliberal trajectory has been very different to that of the United States (Harvey 2005; Rolf 2021; Weber 2021). But this crisis in global capitalism has shaken China's distinctive variety of neoliberalism and led to the emergence of its own brand of militarised neoliberalism.

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The variety of capitalism that has formed in China—marked by overcapacity, real estate crises, surging local government debt, unemployment, and slowing growth—has driven the country's own version of militarised neoliberalism. Put simply, as with Bidenomics, the Chinese version of militarised neoliberalism emerges as a response to pressure in the global capitalist system but also reflects China's different position within that system in relation to the United States. In China, the handling of the capitalist crisis through the usual management of

debt and fiscal stimulation seems to have run its course. This kind of (dis)order has, rather, brought about a reconstitution of the state and market from which party politics, market instruments, and geo-economic warfare are merging. Strategic industries such as AI, batteries, and semiconductors are now served by a particular political technocracy that reflects changing class factions and state transformation. This manifests in an enhanced role for technology firms in China—often linking the state and private sectors—and the dominance of engineers and technocrats.

So, what does the Chinese version of militarised neoliberalism look like?

China's Militarised Neoliberalism

Amid intensifying trade controls and in the face of the diminishing effectiveness of fiscal stimulus, which has long been the typical crisis management tool adopted by Chinese authorities, Xi Jinping's administration has sought to promote a self-sufficient industrial base and technological progress. In 2024, the Third Plenum of the Twentieth Central Committee highlighted the importance of supply-side reforms to improve the quality of growth, improve the resilience and security of industrial supply chains, and promote 'Industry 4.0' (Yu 2024). Unlike the previous plenum, which focused more on institutional reforms, this time the emphasis was on technological sovereignty that sees the assertion of party leadership over resource allocation and market order. Here, the military-industrial sector becomes increasingly crucial, with the promotion of a new institutional model: the 'new-style whole-country system' (新型举国体制). This is a nationwide system whereby relevant resources can be mobilised to mitigate the effects of US–China technological decoupling (Naughton et al. 2023).

This new approach includes the provision of national industrial funds, the creation of national champions, and relevant policies driven by new technology and engineering technocrats that will be discussed in the following section. One of key features of this distinctive militarised neoliberalism is technocratic governance, which places engineers and scientists at the commanding heights of the state apparatus. Governance by these technocrats is strongly linked to efforts to reconsolidate not only President Xi's power but also certain factions of capital that conflict with the current capitalist social order as it is being reshaped by the United States' militarised neoliberalism. However, it is important to distinguish this dynamic from the dominance of technocratic leaders from the fields of science, technology, engineering, and mathematics (STEM technocrats) who characterised the earlier reform period (see Gang 2023). These leaders were one of the driving forces behind the state strategies that created new sites of capital accumulation in China's coastal regions during the 1990s. This period of technocratic governance was combined with a kind of authoritarian model that attempted to institutionalise certain dimensions of the rule of law (such as adminis-

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trative law), contain contestation (for instance, through village elections and a degree of power-sharing), and empower technocratic agencies in a way that resulted in what scholars called 'fragmented authoritarianism' (see Lieberthal and Lampton 1992; Zhang 2019). This stage saw sustained economic growth and a possible boost in the legitimacy of the Chinese Communist Party (CCP).

The current mode, while also driven by technocrats, has somewhat unravelled these institutions and the former technocratic governance model. This shift was exemplified by the end of term limits for the role of President of the People's Republic of China in 2018 through constitutional revision, facilitating a new centre of power within both the CCP and the State. Xi's key policy tenets have re-established discipline among unruly elements of his government through measures such as anti-graft campaigns, the ouster of 'disloyal' high-level officials, and a crackdown on Big Tech for its 'greed' (Economy 2019; Huang 2023). Taken together, these measures have intensified repressive governance through old and new state security agencies, nurturing a surveillance state. As Perry (2024: 1298) neatly describes:

> The Party leader, revered for his infallible Thought, commands the full loyalty of a reunified, disciplined, and reinvigorated Communist Party. To that end, advanced surveillance technology would be blended with much older methods of grassroots monitoring to give the party-state unparalleled power over society.

However, the point we make here is not merely about the surveillance state per se, but also about processes of shifting class relations that underlie this intensifying repressive governance. More crucially, this new state form is indeed a response to the political contradictions that have long been a feature of the technocratic governance model in China. Central to these shifting class relations is the fusion of economic and security imperatives that is now sitting at the heart of a new generation of 'red and expert' technocrats who not only demonstrate political loyalty to Xi's regime but also have relevant expertise and technical chops. This is occurring through the advancement of strategic sectors and the promotion of dual-use technologies (that is, technologies that can be used for both civilian and military purposes) that are core points of the new 'dual circulation' development strategy adopted by the Party-State. These 'red and expert' technocrats not only help strengthen Xi Jinping's grip on power but also represent the emergence of a new interior bourgeoisie active particularly in the strategic sectors that American economic power is now attempting to bring back onshore or advance through 'friendshoring'. These new elites comprising engineers and data scientists not only are different from the economic technocrats who dominated key Chinese state agencies in the decades after economic reform but also are driving new forms of capitalist accumulation.

The Rise of the New Interior Bourgeoisie

Following Poulantzas' (1975; 1978) usage, 'interior' or 'internal' bourgeoisie refers to a business class that establishes relations with foreign capital on which it is dependent due to structural constraints but still needs state protection from risks associated with the penetration of foreign capital into the domestic circuit of capital. The emerging interior bourgeoisie has its roots in China's 'dual circulation' strategy—a concept introduced by President Xi in 2020 amid the deepening US–China trade war. Even though it lacks detail, the strategy emphasises industrial policy and the Made in China 2025 policy, both of which aim to shield China's economy against global volatility and promote self-reliance in terms of resources and dual-use technologies. The last, in particular, are critical not only for fighting climate change, but also for the development of military applications and surveillance tools.

All this was updated in a regulation by the State Council on export controls for dual-use technologies that came into force on 1 December 2024 (State Council 2024). For one, this new development has alarmed some realists who see such export controls as part of China's expansionist strategy. However, what has been overlooked by many is the fact that these cutting-edge technologies have provided fertile ground for the new interior bourgeoisie. Indeed, this new emerging class is central to China's militarised neoliberalism and their interests are extended through the emerging group of technocratic elites who are tasked with advancing 'the new big three' strategic sectors: electric vehicles (EVs), lithium-ion batteries, and solar panels (Ouyang 2024). Consistently with what Poulantzas noted about class formation and capital accumulation, this class is maintaining 'its own economic foundation and base of capital accumulation both within its own social formation and abroad' (1975: 72). They are reshaping the project of (re-)globalisation, for instance, through subsidies and incentives for the establishment of manufacturing in emerging markets such as Mexico and Thailand, as made abundantly clear by the case of China's BYD, one of the global leaders in EV production (see Yu et al. 2024).

Recent work by Alami and Dixon (2022) has analysed how state capitalism rooted in the ever-changing geo-economic order has been reorganised into different political and institutional forms and has, in turn, expanded the role of the state. One key aspect of this is a close nexus between key state institutions and business. However, where China's case diverges from Alami and Dixon's reading of state capitalism is in the identification of the emerging business class. While finding expression through those state-led strategic sectors, this class continues to bring itself to the centre of the global capitalist economy and reconcile with various dimensions of the neoliberal global order.

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Dozens of well-connected state-owned enterprises (SOEs) and tech entities have benefited from the manifestation of this new technocracy and associated priority areas. Huawei, blacklisted on the US Entity List, has been among the top recipients of the China Integrated Circuit Investment Fund, its success also benefiting entities such as Alibaba and

At the same time, the space for venture capital and private equity investment is clearly shrinking. In the first half of 2024, venture capital and private equity investment in China dropped 38.7 per cent and the money raised by fund managers fell 22.6 per cent.

Tencent, as they must ensure technological interoperability (Hmaidi 2024). The investment fund has doubled in size over the past decade, from RMB138.7 billion in 2014 to RMB 344 billion in 2024 (Tabeta 2024). The state's active role in the sector has produced new champions—for example, the Wuhan-based Yangtze Memory Technologies Corporation (YMTC), the vanguard of the country's efforts to create a domestic semiconductor industry, as well as the Beijing-based Naura Technology Group and Shanghai Micro Electronics Equipment, which is majority controlled by the Shanghai Government. YMTC is followed closely by China's 'tech' leadership and supervised by officials in the State Council (Pan and Cao 2023).

At the same time, the space for venture capital and private equity investment is clearly shrinking. In the first half of 2024, venture capital and private equity investment in China dropped 38.7 per cent and the money raised by fund managers fell 22.6 per cent (Russell 2024; see also Wataru 2024). This contrasts with the militarised neoliberalism that we have witnessed in the United States, which has brought civilian conglomerates to the centre of its new military-industrial complex (see Wijaya and Hayes 2024). For example, as of October 2024, OpenAI, a rival to DeepSeek, had managed to raise US$6.6 billion from civilian conglomerates, including Microsoft and Japan's SoftBank Group. In the context of the United States' militarised neoliberalism, the structural power of venture capital and executives from Silicon Valley has increased as the state's emphasis on dual-use technology advancement has become a convenient banner to orchestrate and leverage expanding military expenditure and various subsidies and other types of government support.

In the case of China, overseas backers of venture capital funds—which were used to nurture fast-growing startups—have been replaced with domestic capital, mostly from local governments. In October 2024, Guangdong Province adopted new regulations to encourage state-owned venture capital firms to invest in high-risk tech innovation sectors and called for city governments to improve mechanisms to evaluate these firms' performance. Similar regulations have been issued by the Shanghai Municipal Government. In April 2024, Shanghai kicked off a merger between the city's top-two state-owned investment firms—Shanghai State-Owned Capital Investment (上海国有资本投资有限公司) and Shanghai Science and Technology Venture Capital (Group) Company (上海科创集团)—to set up a RMB130-billion (US$18 billion) juggernaut tasked with developing new champions (Bao and Han 2024). Yet, as the government-backed funding is also supposed to be driving job creation, only SOEs that are willing to take bigger risks and startups that work on high-end machinery and domestic replacement will be direct beneficiaries.

However, despite the growing importance of domestic funds, the internationalisation of the new interior bourgeoisie is now linked to specific geographies—for example, repressive Gulf State regimes with access to capital markets. As widely reported, Prosperity7, part of the Saudi Arabian state-owned oil group Aramco's venture capital arm, has

added to Chinese Government funds for developing a new national rival to the United States' OpenAI (Olcott 2024). The investment is indicative of Saudi Arabia's new accumulation strategy to support an ecosystem that could guard against Silicon Valley dominance in AI by investing in China's global production networks. Concurrently, Chinese companies such as Lenovo and Tencent Cloud have reportedly expanded into Saudi Arabia and built manufacturing plants there. These trends suggest that these new business groups and factions of state capital are internationalising and linking to global capital markets. In Brazil, SpaceSail, a Chinese state-backed company, is set to launch a satellite service in competition with Elon Musk's Starlink (Pooler et al. 2024).

More importantly, their internationalisation is also linked to domestic political dynamics. As we have seen, the continuation of the process of accumulation is contingent on a 'red and expert' technocracy from which Xi built his political base (Huang and Henderson 2022). The entire governing structure has seen a shift in decision-making functions from government bodies to party organs, which are now occupied by these technocratic elites who are being held accountable for priority policies (Wu 2024: 10). As Huang and Cortese (2023) recorded, 10 of the 205 full members of the CCP's Twentieth Central Committee are aerospace industry veterans who are responsible for running major projects, including for rockets and commercial jets; an additional 36 members are in leadership in provinces in which the key performance indicator is no longer GDP growth but 'nanometres' or advancing technological self-reliance. The rise of military-industrial engineers is spectacular and distinctive, and they are gaining more political clout in the context of Xi's technological self-reliance agenda. Their presence does not threaten but consolidates Xi's power due to his exclusive control over the military.

State Institutions

The importance of 'the three new' (新三样) strategic sectors—EVs, lithium-ion batteries, and solar panels—is rooted in an emerging centralised policy and decision-making regime that involves a new generation within the CCP leadership, comprising scientists and engineers turned technocratic leaders. These politico-engineers include new vice-premiers Zhang Guoqing, once a chief executive of a weapons supplier, and Liu Guozhong, who trained as an ordnance engineer. Nuclear engineer Li Ganjie now oversees senior party appointments as the head of the Organisation Department of the CCP. There is also the aerospace technology expert Ma Xingrui, appointed CCP Secretary of the turbulent Xinjiang region, and rocket scientist and former deputy general manager of China Aerospace and Technology Corporation Yuan Jiajun, who serves as Secretary of the CCP Chongqing (Yu 2023). Xi also promoted Jin Zhuanglong, aerospace engineer and businessman turned politician, to critical positions as CCP Group Secretary and Minister for Industry and Information Technology (Ding and Tang 2024).

Even though China's technocracy is led by engineers who are well-equipped with advanced education, rich corporate experience, and technological knowhow, they are, first and foremost, party-state cadres and statist business-class elites.

Superficially it would appear that the appointment of these engineers reflects a version of technocracy in which 'scientific experts advise the decision-makers and politicians consult scientists in accordance with practical needs' (Habermas 1970: 66–67). Yet, our argument is that this is not simply about the dominance of these engineering technocrats or a new form of nationalist industrial policy but rather is symptomatic of the emergence of a new capitalist class. In particular, this group is inextricably linked to the new constellation of state capital and finance that now occupies a central position within the current investment-heavy regime (Chen 2020; Cheng 2022). As explained earlier, SOEs with specialisations mirroring those of US industry incumbents in key areas have sprung to prominence, as the state realises the enormity of the self-sufficiency project in the wake of global 'de-risking China' imperatives. Therefore, the emergence of technocratic elites is indicative of the growing clout of the military-industrial engineers and scientists in the processes of Chinese state capitalist accumulation amid combined pressures.

Even though China's technocracy is led by engineers who are well-equipped with advanced education, rich corporate experience, and technological knowhow, they are, first and foremost, party-state cadres and statist business-class elites. Their promotion to top CCP leadership positions is indicative of 'the party-state's further control of the economy by enlarging the state sector to such an extent that it overwhelms the private sector' (Wu 2024: 4). In this setting, unlike in the United States, would-be entrepreneurs find it difficult to access investment capital given the government's strong emphasis on technology and heavy industries, which by nature require a more state-led approach. As Suzuki (2024) reports, startups once nurtured under the slogan 'massive entrepreneurship and innovation by all' (大众创业万众创流), popularised by the late Li Keqiang, have been rolling back their business.

Internal Contradictions

It is important to note that this does not necessarily solve long-term structural problems and inequalities—just as it did not in the United States. This is reflective of UCD. The capitalist accumulation in the United States transformed the conditions by which techno capitalism subsequently grew in China. But, while these new circuits of accumulation were promoted by elites to address geopolitical risks, they have generated uneven development. A strong push for technological self-reliance in China has entailed a large shift in class power away from the middle classes towards the emerging interior bourgeoisie. For example, as widely reported, after Wuhan reopened after the pandemic in 2021, YMTC—the new national champion—took advantage of state policies to mobilise hundreds of engineers. These workers laboured for three shifts a day in a bid to overhaul the company's production processes, replacing as much foreign equipment as possible (see Cheng and Li 2021).

Moreover, it is apparent that weak consumer demand has been unable to absorb the supply of goods produced in the country. Instead, the state continues to double down on its use of tax refunds and other 'hidden' subsidies for EVs and other strategic business, such as research and development for solid-state batteries and chip-making. China's total annual tax rebates to major mainland companies rose 400 per cent over the decade up to 2023, fuelling their exports to the United States and Europe (Cho 2024). This has reinforced uneven development in which the better-off coastal regions in China continue to benefit. The most recent RMB344-billion (U$47.5 billion) state-backed investment fund for chips, announced in May 2024, can only see fewer local governments contributing (Bao 2024). Only the larger cities and more prosperous provinces with stronger chip industries, such as Beijing, Shanghai, and Guangdong, can contribute and maximise financial support.

The recent emergence of property crises represents an important turning point for the Chinese economy and potential moment for decisive intervention. The current crisis had its roots in the RMB4-trillion stimulus packaged introduced by China's then premier Wen Jiabao in the wake of the 2008 Global Financial Crisis. Various elements of the stimulus package resulted in excessive borrowing by real estate developers, with subnational governments enjoying the revenue generated from land sales. In its September 2024 meeting, the Politburo opted to launch a package of incremental property market support measures, which mandated China's central bank to lower interest rates and regulators to ease some property curbs to promote the stabilisation of the real estate market and boost domestic consumption. The central government through the National Financial Regulatory Administration is also ramping up 'whitelist' loans targeting unfinished housing projects to solve China's faltering property market and support cash-strapped developers who have been ruled compliant with regulations. Meanwhile, local governments tailor measures according to their specific conditions by amending previous housing purchase restrictions to stabilise the housing market.

As of September 2024, 5,392 projects had received bank loans, with total financing amounting to nearly RMB1.4 trillion (Cash and Gao 2024). Yet, in part due to China's extraordinarily weak consumption, these measures only intensified the risk of possible crisis tendencies. A deepening real estate market crisis casts a shadow over some fundamental imbalances in China's economy. Decades of export-oriented growth and rapid investment suppressing interest rates and wages have come at the expense of household income for workers (see Rogoff and Yang 2021). While China's central bank seeks to revive flagging economic growth by encouraging demand, social safety nets—the quickest solution to redirect people from saving to consumption—are still insufficient. China's social transfers are low compared with those of Organisation for Economic Co-operation and Development (OECD) countries, accounting for about 6 per cent of GDP (Wright et al. 2024). This echoes what Huang Yasheng has noted in an interview with *ChinaTalk* (Ottinger and Schneider 2024):

> Xi improved from a low base, which is commendable, but it was achieved largely through transfers from urban to rural people, not through fiscal stimulus … This transfer approach can work for a period, but with the current challenges to GDP growth, it will become increasingly difficult to rely on pure transfers.

Meanwhile, as local governments struggle to balance their budgets, the top leadership pulls different policy levers to diversify local revenue sources. For instance, in an attempt to address the US$13-trillion debt held by local governments, the central government has mandated that consumption tax collection will be done at the local level. Furthermore, to solve the liquidity crisis, many local governments have been opting to scrap the upper limit on residential land prices to revive sales.

What Lies Ahead

We write this at the start of Donald Trump's second presidency, as tech companies play a dominant role in shaping US trade and investment policy. This shift is not only reminiscent of China but also a direct response to China's strategic investments in key technologies. In both countries, the focus on technology must be understood within the broader context of global economic stagnation, which has reshaped US–China relations and capital accumulation strategies. Our article situates these political and social dynamics within global patterns of uneven and combined development, highlighting both the convergence and the divergence of Chinese and US approaches to technology.

In China, a key feature of technology-centred accumulation is the rise of what we call the new STEM technocrats—engineers and applied technology specialists who play a crucial role in shaping industrial policy, from electric vehicles to AI. Equally important is the growing influence of what we term the 'interior bourgeoisie'—a domestic capitalist class rooted in and shaped by the Chinese State but increasingly oriented towards global markets. This *interior bourgeoisie*, comprising both key state-owned and private firms, has emerged as the new hegemonic faction within the state structure. This position enables them to implement distributive measures while continuing to develop transnational linkages and alliances.

Ultimately, it remains to be seen how effectively the Chinese and US versions of militarised neoliberalism can address the deep structural crisis of global capitalism. Both models involve a hybridisation of different forms of capitalism alongside interventionist policies that incorporate neoliberal logics. This, in turn, generates pressures and contradictions within political and technocratic institutions, reshaping policy responses in both countries. One key consequence is that this crisis management may further drive these states towards intensified forms of authoritarian control, albeit under different neoliberal or developmental guises. ■

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